

## ABSTRACT

Dry dipercarboxylic acid material and methods of using dry dipercarboxylic acid particulates to form novel sterilizing solutions or liquid chemical germicides. The dipercarboxylic acids or organic diperoxygen compounds can be synthesized and isolated as solid powders with an extended shelf life. The powders are also soluble in water for quickly preparing liquid disinfectant solutions, whenever and wherever desired, from a potable water source. The dry dipercarboxylic acid materials are selected from diperglutaric acid, diperadipic acid, diperpimelic acid, dipersuberic acid, and diperazelaic acid. Upon dissolution into water, these compounds have demonstrated the ability to inactivate high numbers of spores, including sterilization of medical equipment in 10 minutes at room temperature.